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Monthly Statistical Report

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OCTOBER 1987

SUMMARY

Total deliveries for October, up 1.9 percent over a year ago, were about in line with consumption trends—but individual products were not so consistent. Gasoline deliveries, after rising at well above the trend in September, declined slightly in October. But distillate deliveries rose over 8 percent, partly because of an unusually cold month, and kerosine jet fuel's increase was almost twice as large as that for distillates. These swings in deliveries are unlikely to represent changes in actual consumption of the same magnitude, even allowing for the effect of chilly weather on heating oil demand in the case of distillates. Residual fuel oil's nearly 13 percent drop, however, continued the familiar pattern of declines experienced for most of the year, while deliveries in the "other oils" category rose about 1 percent.

Start-up of Endicott production, almost a decade after its discovery, gave Alaskan production a small boost in October, but lower 48 production continued to show large declines compared with early 1986. Because of the decline in domestic production and rise in consumption, imports so far this year have amounted to almost 40 percent of total deliveries, the highest level since 1980 for a similar ten-month period. October's imports, at close 7 million B/D, continued the high levels of recent months but were nevertheless not enough to contribute to any stockbuilding during the month. Inventories of major products fell, but an increase in crude oil stocks of over 16 million barrels kept October's inventories about even with those at the beginning of the month. As a result of their increase, crude oil stocks ended the month higher than has been common during the past several years.

PRODUCT SUPPLIED [1/]

Motor Gasoline

DELIVERIES SWINGS MASK STEADY RISE IN CONSUMPTION. Gasoline deliveries' growth rate has been vacillating in the past several months—weak in August, above-trend in September, and now down half a percent for October—but underlying consumption growth appears to be continuing, though perhaps at a somewhat slower rate. Highway travel has been rising roughly 3.5 percent year-to-year in recent months, down from the 4.5 percent average increase of the first four months of this year. With an increase in average fleet fuel efficiency of from 1 to 2 percent, however, this still implies that gasoline consumption has been rising somewhere between 1.5 and 2.5 percent—about in line with the year-to-date growth in deliveries.

Premium unleaded's share, after rising about 5 percentage points during last year, has apparently stabilized at about one fifth of the market this year. The increasing availability of midgrade unleaded has provided an alternative for motorists seeking higher octane gasoline than regular unleaded and may have cut into premium's growth to some extent. Meanwhile, the market share of unleaded grades as a whole has continued to rise, and October's year-to-year gain in share of 6.6 points, to 76.8 percent, is typical of recent increases.

Distillates

COLD WEATHER, RAIL AND TRUCK TRAFFIC BOOST DELIVERIES. Another strong gain for distillate deliveries in October followed September's large increase. About a third of the 243 thousand B/D, 8.3 percent increase can be explained by unusually cold weather in the East and Midwest—from 30 to 50 percent colder than last yeaf in some regions. (The relatively low number of heating degree days typical for the month is at least partially responsible for the large swings in percentage terms.)

There was continued strength in transportation use, with truck traffic up over 7 percent in September (the latest available). Coal stockpiling in anticipation of a possible strike, in combination with increases for other commodities, helped to boost rail traffic by about 8 percent in October. These increases in truck and rail traffic may have added 80 to 90 thousand B/D to deliveries for the month. Much of the remaining 80 thousand B/D or so of October's increase likely represents additional buying for inventory by distributors and end users.

API ESTIMATES

	OCTOBER		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.9	1.9	16.5	1.9
Crude oil production[2/]	8.2	(2.1)	8.3	(5.1)
Total imports[3/]	6.9	7.7	6.4	5.4
Stocks (million bbl)[3/]	1,078	(2.2)	na	na

Residual Fuel Oil

YEAR-TO-YEAR DROP CONTINUES. Residual fuel oil continued its familiar pattern of deliveries declines in October, falling 12.5 percent or nearly 160 thousand B/D year to year. On a seasonally adjusted basis, however, the level of deliveries of the past several months has shown little trend, indicating that whatever fuel-switching took place earlier in the year away from residual fuel oil may, for the most part, have levelled off in more recent months.

Increased nuclear generation capacity this year on the East Coast, where most of electric utility usage of residual fuel oil takes place, has, along with attractively-priced natural gas, edged out residual fuel oil in many cases. As a result, nuclear generation accounts for over 27 percent of this year's January-to-July electricity generation on the East Coast, up from 25 percent a year ago. The region's petroleum share, falling by a similar amount, comes to only 12 percent so far this year. The share of natural gas is up slightly.

Kerosine Jet Fuel

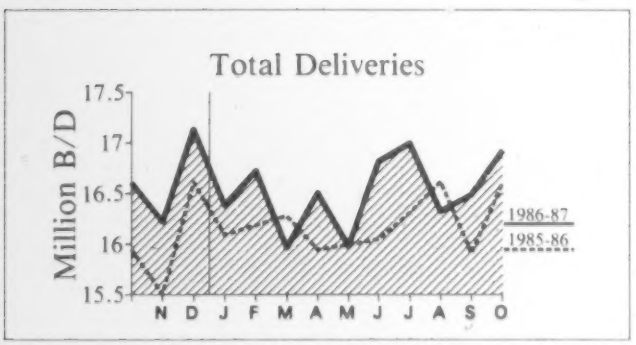
AIR TRAFFIC GROWTH SLOWING RECENTLY. After year-to-year increases of 5 percent or less in the past several months, kerosine jet fuel deliveries jumped ahead by 15 percent in October. Growth in air traffic , however, continues in an estimated 5 to 6 percent range for miles flown, roughly half the rate of increase earlier this year. A revival in international travel from last year's depressed level has been a major contributor to what growth remains in air traffic. For the year to date, data on deliveries and air traffic show a closer relationship—kerosine jet fuel deliveries are up about 6 percent, only a percentage point less than estimated for miles flown. Increased fuel efficiency in the aircraft fleet can easily account for the small difference in growth rates.

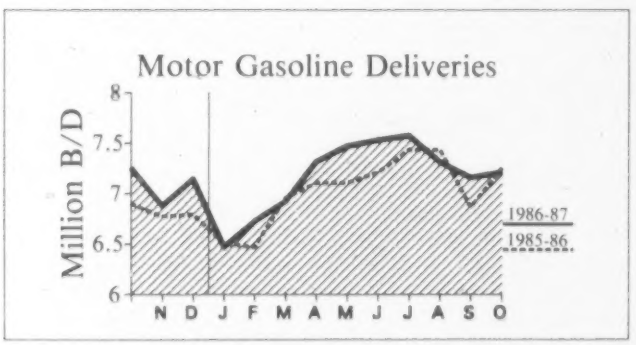
Other Oils

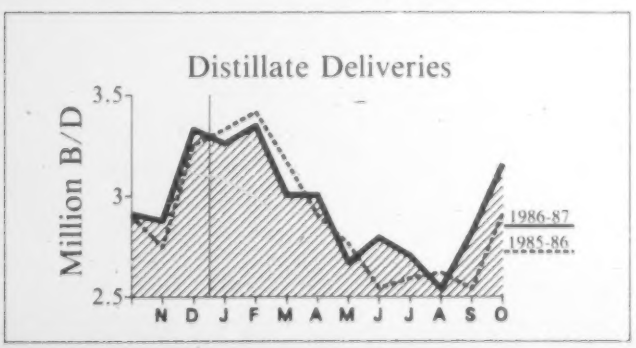
DELIVERIES RISE 1.1 PERCENT. Products supplied in the other oils category for October are estimated to be 4,277 thousand B/D, up 2.2 percent from last month's estimate of 4,184 thousand B/D and 1.1 percent above last year's revised estimate of 4,230 thousand B/D. Much of the increase is due to seasonal factors reinforced by climatic conditions.

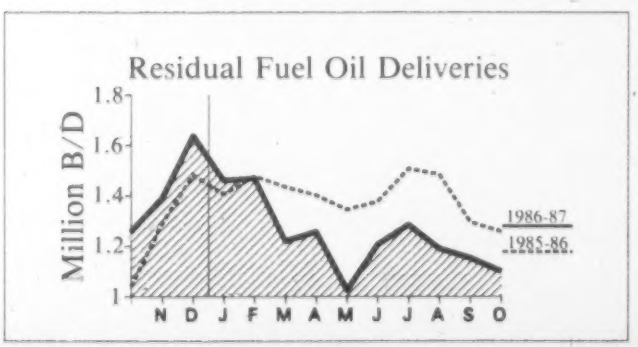
Propane deliveries for space heating were especially strong during the month: colder-than-average weather throughout the Midwest and Northeast stimulated demand for the fuel for both agricultural (e.g. poultry raising for the Thanksgiving holiday) and residential/commercial applications. Kerosine deliveries also registered sizable increases in deliveries in the same regions. Despite the onset of cold weather, asphalt and road oil deliveries continued to be strong as a consequence of last summer's passage of the Federal highway bill as several eastern states continued to accelerate long-delayed road maintenance schedules.

As with last month, propane and naphtha continue to be the preferred petrochemical feedstocks, displacing small amounts of ethane. In general, petrochemical feedstock deliveries have continued to remain stable at present levels, contributing to the moderation of increases in other oils deliveries compared with the first three quarters of the year. Refinery gas production declined significantly from last month to levels of a year ago largely as a result of a 3.4 percent month-to-month decline in motor gasoline production.









SUPPLY [1/]

Production

ENDICOTT ADDS TO ALASKAN PRODUCTION. In Alaska, initial production from the offshore Endicott field, with facilities designed to eventually produce about 100 thousand B/D, gave a small boost to Alaskan production in October, which continued at close to the 2 million B/D mark. Lower 48 production, however, continued to show large declines versus early 1986, down by 1 million B/D or nearly 14 percent.

The history of Endicott's development provides one example of the time-consuming process of bringing on new production in frontier regions. Though the field was discovered almost a decade ago, further exploratory work was necessary before a decision to develop it could be made in 1981, and it took until 1985 to gain necessary permits and approvals. Actual development work had been under way since then.

Third quarter well completions experienced the first year-to-year increase since last year's major crude oil price decline, according to API's latest *Quarterly Completion Report*. Preliminary estimates of third quarter drilling, however, remained at only half of that for the same period two years ago, and with year-to-date efforts still down 20 percent from the similar 1986 period—a year in which new reserves replaced only about half of domestic production—it is most probable that U.S. crude oil reserves are continuing to decline.

Imports

IMPORTS CONTINUE NEAR 7 MILLION B/D. Imports remained at close to 7 million B/D in October, not much less than the recent-year record of 7.4 million B/D in July. Even so, October's level of imports was not high enough to support inventory building, since total inventories only held steady for the month. For the year to date, imports have risen to nearly 40 percent of total deliveries, the highest since 1980. Product imports however, have declined this year in favor of crude oil. A decrease in residual fuel oil imports, paralleling that product's demand decline, accounts for the bulk of the slippage, while imports of gasoline and distillates are still up slightly over the year-ago period.

For October, imports of gasoline and components, at 433 thousand B/D, were up about 30 thousand B/D from a year ago, an increase less than the 60 to over-100 thousand B/D increases of recent previous months; distillate imports also rose about 30 thousand B/D while residual fuel oil imports continued their year-to-year decline with a nearly 190 thousand B/D loss.

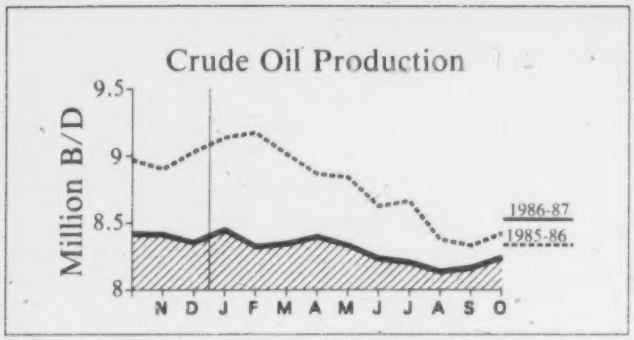
Refinery Operations

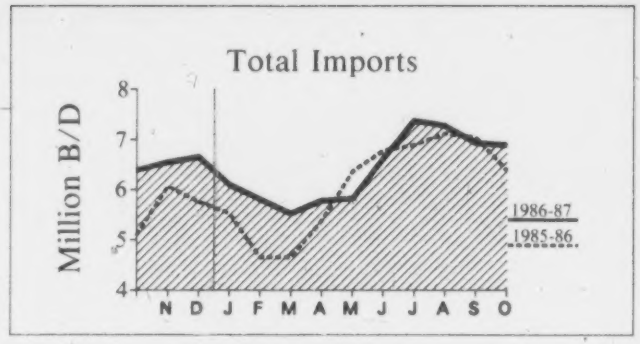
DISTILLATE OUTPUT UP 2 PERCENT FROM LAST OCTOBER. Distillate yields which were up slightly from a year ago helped to translate the 0.7 percent rise in input to distillation units for October into a 2 percent increase in distillate production. Production of gasoline was also up slightly, while residual oil from domestic refineries continued to edge out imports with a 7 percent production gain over last October, when heavy fuel oil yields were unusually low. Despite the increase in refinery runs, October's utilization rate dropped 0.8 percentage point from a year ago because of somewhat higher refining capacity.

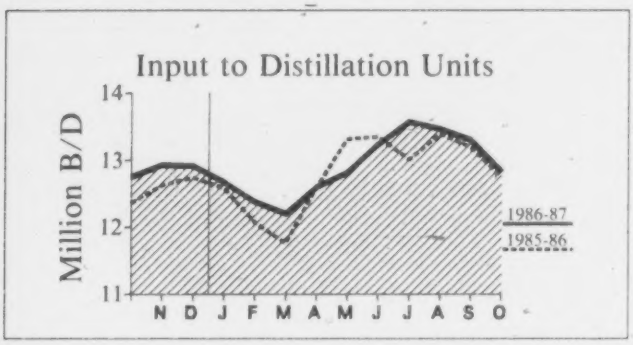
Inventories

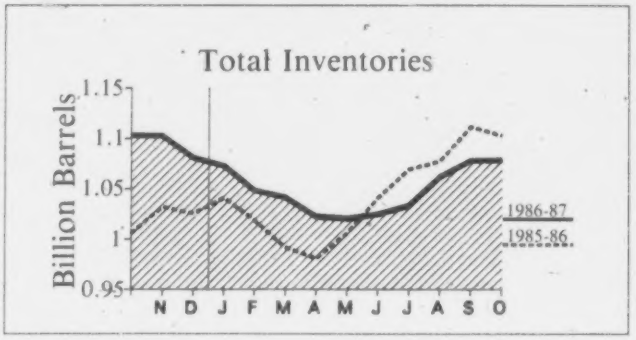
CRUDE OIL STOCK INCREASE BALANCES PRODUCTS' DECLINE. Total inventories remained nearly steady in October, the over 16 million barrel increase in crude oil stocks roughly equalling the decline for products.

Motor gasoline stocks fell 10 million barrels but ended the month close to the year-ago level; if the month's increase in distillate deliveries had been more in line with longer run consumption trends, inventories of that product, rather than declining 5 million barrels, would have held steady or increased slightly. While stocks of major products were declining, crude stocks rose to over 350 million barrels, a level higher than usual compared with the last several years. A reduction in refinery input of about half a million B/D from September's levels—not unusual at this time of year—combined with crude oil imports continuing in the 5 million B/D range were responsible for crude oil stocks' rise.









1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 536 million barrels as of October 31, 1987).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	OCTOBER			YEAR-TO-DATE		
	1987[1]	1986[2]	% Change	1987[3R]	1986[2]	% Change
Products Supplied:						
Total motor gasoline	7,213	7,250	(0.5)	7,171	7,038	1.9
Finished leaded motor gasoline*	1,673	2,164	(22.7)	1,769	2,225	(20.5)
Finished unleaded motor gasoline*	5,540	5,086	8.9	5,402	4,813	12.2
Naphtha-jet	206	207	(0.5)	205	201	2.0
Kerosine-jet	1,226	1,066	15.0	1,149	1,085	5.9
Distillate fuel oil	3,155	2,912	8.3	2,925	2,876	1.7
Residual fuel oil	1,101	1,259	(12.5)	1,235	1,399	(11.7)
All other oils[4]	4,277	4,230	1.1	4,057	3,909	3.8
Reclassified[5]	- 256	- 322	(20.5)	- 239	- 308	(22.4)
Total domestic products supplied	16,922	16,602	1.9	16,503	16,200	1.9
Exports	668	831	(19.6)	738	777	(5.0)
Total products supplied	17,590	17,433	0.9	17,241	16,977	1.6
Supply:						
Domestic production:						
Crude oil[6]	8,240	8,419	(2.1)	8,290	8,740	(5.1)
Natural gas liquids	1,608	1,477	8.9	1,598	1,547	3.3
Other supply[7]	870	868	0.2	928	856	8.4
Total domestic supply	10,718	10,764	(0.4)	10,816	11,143	(2.9)
Imports:						
Crude oil, total	4,978[10/]	4,382[10/]	13.6	4,529[10/]	4,063[10/]	11.5
Canadian	660	592	11.5	621	563	10.3
Other	4,318	3,790	13.9	3,908	3,500	11.7
Products, total	1,907	2,008	(5.0)	1,888	2,028	(6.9)
Residual fuel oil	449	635	(29.3)	548	653	(16.1)
Other	1,458	1,373	6.2	1,340	1,375	(2.5)
Total imports	6,885	6,390	7.7	6,417	6,091	5.4
Total supply	17,603	17,154	2.6	17,233	17,234	-
Stock change, all oils	+ 13	- 279	XXXX	- 8	+ 257	XXXX
Refinery Operations						
Input to crude oil distillation units	12,836	12,753	0.7	12,910	12,807	0.8
Operable capacity	15,697	15,435	1.7	15,670	15,462	1.3
Refinery utilization (%)[8]	81.8%	82.6%	(1.0)	82.4%	82.8%	(0.5)
Crude oil runs	12,743	12,636	0.8	12,813	12,698	0.9

Stocks (millions bbls.)	1987		1986[2]	% Change from ...	
	Oct. 31[9]	Sep. 30[9]	Oct. 31	Previous Month	Year Ago
Crude oil[10/]	351.1	334.7r/	343.9	4.9	2.1
Unfinished oils	103.4	103.2r/	101.3	0.2	2.1
Total motor gasoline**	219.5	229.4r/	222.4	(4.3)	(1.3)
Finished leaded motor gasoline*	51.7	54.7	64.8	(5.5)	(20.2)
Finished unleaded motor gasoline*	130.4	135.3r/	119.7	(3.6)	8.9
Naphtha-jet	6.7	6.5	6.8	3.1	(1.5)
Kerosine-jet	42.9	43.6r/	43.9	(1.6)	(2.3)
Distillate fuel oil	124.1	128.9r/	151.6	(3.7)	(18.1)
Residual fuel oil	46.7	45.1	45.8	3.5	2.0
All other oils	184.0	186.6r/	187.2	(1.4)	(1.7)
Total all oils	1,078.4	1,078.0r/	1,102.9	-	(2.2)

1/ Based on API estimated data converted to a monthly basis.
2/ Source: U.S. Department of Energy.
3/ Source: January-August, U.S. Department of Energy, September-October, API.
4/ Includes crude losses.
5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.
6/ Includes lease condensate.
7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.
8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."
9/ Derived by interpolating API weekly stocks data.
10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
R/ Revised.
* Included in motor gasoline.
** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.